Attachment A

BACKGROUND FOR MACT STANDARDS DEVELOPMENT SURVEY

Hardwood Plywood and Veneer

The purpose of this attachment is to provide additional detail on the relevant requirements of the Clean Air Act and to provide an explanation, where appropriate, for the purpose and objectives of individual survey sections or questions. A list of acronyms and unit abbreviations also is provided.

How does this survey fit into the requirements of the Clean Air Act?

This survey was developed by the U. S. Environmental Protection Agency's (EPA's) Office of Air Quality Planning and Standards Emission Standards Division (OAQPS/ESD) to help EPA meet its obligations under the Clean Air Act Amendments of 1990. Specifically, the Clean Air Act Amendments require EPA to develop regulations under Section 112(d) to limit emissions of hazardous air pollutants (HAP) from major and area sources of emissions. Section 112(a) defines a major source as "any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants." Based on the Administrator's determination, EPA may lower the major source cutoff for individual HAP. An area source is "any stationary source of hazardous air pollutants that is not a major source."

The Clean Air Act Amendments of 1990 prescribe an analytical framework that EPA is to apply in developing national emission standards for hazardous air pollutants (NESHAP) for major sources. A key concept in this framework is the establishment of emission standards based on the maximum achievable control technology (MACT). The amendments specify that NESHAP for existing sources are to be no less stringent (but may be more stringent) than the average emission limitation achieved by the best performing 12 percent of the existing sources in each category or subcategory of sources (i.e., the MACT floor). In categories or subcategories with less than 30 sources, the MACT floor is to be based on the average emission limitation achieved by the best performing 5 sources. The MACT floor for new sources is the emission control that is achieved in practice by the best controlled similar source.

A second key feature of the NESHAP development process is that of determining subcategories. The Clean Air Act Amendments allow the EPA Administrator to "distinguish among classes, types, and sizes of sources within a category or subcategory in establishing such standards" (Section 112(d)). The effect of this provision is that for each category or subcategory for which EPA is developing NESHAP, the resulting standards could be tailored to account for significant differences in classes, types, and sizes of sources.

What sections and questions of the survey should I complete?

The hardwood plywood and veneer survey is targeted towards plants that manufacture some combination of the following: hardwood plywood, hardwood veneer, and/or kiln-dried lumber. The survey has been organized into several sections pertaining to the types of products and manufacturing operations at veneer and plywood plants. Depending on what you manufacture, certain sections of the survey will apply to your facility and other sections of the survey will not. Sections II (General Information), III (Process Description), and VIII (Facility Emissions) should be completed for all plants. The remaining sections contain instructions at the beginning of each section to indicate what plant types should complete the section. Section IV

(Veneer Plant Operations) is to be completed for plants that manufacture veneer and Section V (Veneer Dryers) is to be completed for plants that dry hardwood or softwood veneer. Section VI (Lumber Kilns) is to be completed if lumber kilns are located on the plant site, Section VII (Plywood Plant Operations) is to be completed for plants that make plywood, and Section IX (Air Pollution Controls) should be completed for plants that use air pollution control devices or methods.

What information is EPA looking for in the survey and how will EPA use the information?

Section I. Instructions.

This section introduces the survey and defines the source category operations that are to be addressed in completing the survey. Although the source category is listed as "plywood and particleboard," this source category also includes facilities that manufacture oriented strandboard (OSB), waferboard, hardboard, fiberboard, medium density fiberboard (MDF), particleboard made from agricultural fiber (e.g., strawboard), hardwood and softwood veneer, laminated veneer lumber (LVL), and other engineered wood products. Lumber kilns may also be covered by this source category. However, this survey is only requesting information on lumber kilns that are located on the same site as (co-located with) facilities that manufacture the products mentioned above. No additional emission testing or monitoring is required to respond to this survey. In those sections of the survey where process information is requested, respondents should indicate if their responses are design values, estimated values, or actual (measured) values. Also, if the answer to a survey question is unknown (UK), unavailable (UA), or not applicable (NA), respondents should state whichever of these is applicable, rather than leaving the survey block blank. The instructions provide an EPA contact who can answer questions about the survey, as well as the address to where you should mail the completed survey.

Section II. General Information.

This section of the survey is where the technical contact, plant, and company are listed. This information is used by EPA to ensure that the plant is properly identified and that the appropriate contacts are available to answer any questions EPA might have on the completed survey. Because of the complex relationships between and among corporations, you are asked to distinguish between the legal owner and the operator of the plant. In some cases, one owner may sell a specific operation to another company, but continue to operate the facility. Information about the legal owner may be used in EPA's economic analysis to distinguish small businesses.

Question F on size of the company is asked so that EPA may identify small businesses. The Regulatory Flexibility Act (Public Law 96-354, September 19, 1980) requires consideration of the impacts of regulations on small businesses. The major purpose of the Regulatory Flexibility Act is to keep regulatory requirements from getting out of proportion to the scale of the businesses being regulated, without compromising the objectives of, in this case, the Clean Air Act. If a regulation is likely to have a significant economic impact on a substantial number of small businesses, EPA may give special consideration to those small businesses when analyzing regulatory alternatives and drafting a regulation. For producers and users of HAP, the Small Business Administration uses employment ranges to separate businesses into "large" and "small" categories. These employment ranges are given in Question F. (In any given situation, the actual cutoff between large and small will depend on the Standard Industrial Classification of the establishments in question. Furthermore, EPA sometimes finds that different employment ranges or even other criteria are more suitable for the process of defining which businesses are large and which are small.)

Question G regarding products is included so that the products manufactured at your facility can be appropriately classified. The EPA typically analyzes data along process (or product) lines, and therefore, proper classification of process lines and facilities is essential. In some cases manufacturing processes (and possibly emissions) may differ depending on the secondary uses of a product. Questions on the secondary uses of the products will help EPA to characterize the hardwood plywood and veneer industry and to evaluate potential subcategories.

Section III. Process Description.

In Question A, you are asked to provide a process description and/or flow diagram. You should include a process description and/or flow diagram for each process line at your facility (if there is more than one process line). For this survey, a process line refers to each process that starts with raw materials and ends with a finished product. The EPA understands that sometimes process areas or equipment may be common to several different product lines. Multiple process descriptions or flow diagrams may be needed to describe a single process line. The process description is an essential tool for EPA to use in understanding how the emissions data relate to plant-specific processes. In many cases, plants may have an "already-prepared" process description, equipment list, and/or flow diagram in a State permit application. If this information contains sufficient detail, you may attach the information to the survey rather than preparing a separate process description.

Question B asks for a description of any planned expansions, equipment upgrade/changes and any planned installations of new air pollution control devices in the next 5 years. For this survey, "planned" is understood to refer to those activities for which corporate approval of expenditures or other such commitments have been made as opposed to future "wish list" projects which may or may not ultimately be executed. This information will be used to assess the growth potential of the industry and to maintain up-to-date information on equipment and controls at each facility.

Question C asks for a description of any other factors not addressed elsewhere in the survey that might serve to distinguish the plant from other hardwood plywood and veneer plants. Information supplied in response to this question could impact selection of subcategories or MACT selection. Any plant-specific circumstances that you believe may warrant special consideration as MACT standards are developed should be included in the response to Question C.

Section IV. Veneer Plant Operations.

This section should be completed for facilities that manufacture veneer. This section asks for information on wood species used to manufacture veneer, production amounts, plant production capacity, and operating schedule. Information on the wood species will assist EPA in characterizing the hardwood veneer industry and in developing model plants. Information on production amounts and capacity and operating schedules may be used in making subcategory decisions. For example, these data are used in evaluating size distinctions between facilities.

Please note that you are asked for *gross* annual production rather than *net* annual production. Gross production is equal to net production plus any rejected material which has been processed but is unsuitable for sale. The EPA is requesting gross production data so that emissions data and production data will be on the same basis (i.e., even though material is rejected, the processing of that material results in emissions). Production data should be provided for the 1997 calendar year. Facilities that began operation of a process line after January 1, 1997 should provide an entire years worth of operational data for that process line. For example, a

plant that began operation of a process line on March 1, 1997 should provide operational information from March 1, 1997 to March 1, 1998. In cases where a production line has not been operated for an entire year, the plant should estimate production information for an entire year based on the time the process line has been in actual operation, and document how the extrapolated value was calculated. This will ensure that all operating information collected by EPA is on an annual basis and will allow EPA to compare sizes of plants for purposes of subcategorizing and analyzing regulatory alternatives.

Section V. Veneer Dryers.

This section should be completed for plywood or veneer plants that operate veneer dryers for either hardwood or softwood veneer. You are asked to complete Table 1 by providing information on each of the veneer dryers at your facility. The veneer dryer information is needed by EPA to provide an understanding of how dryer operating parameters may affect emissions. This information may be used in setting the MACT floor, evaluating control options, and identifying potential subcategories.

The table asks for dryer throughput in order to assess nominal equipment capacity. Because dryer throughput varies depending on wood species, moisture content, etc., you are asked to provide best estimates of nominal dryer throughput.

Make additional copies of Table 1 as needed (e.g., if you have more than three veneer dryers make a copy of the table) to provide the data requested for all products. As with any section of the survey, if data requested in Table 1 are already available in an alternative format (such as sections/tables from a State permit application) that information can be attached in lieu of completing all or part of the table, as long as the attached information addresses all of the information requested in the table.

Section VI. Lumber Kilns

This section should be completed for plants that operate lumber kilns located on the plant site. Information is requested on the amount of lumber dried in the lumber kilns, the annual operating capacity of the lumber operations at the facility, and the number of lumber kilns operated. In addition you are asked to complete Table 2 for each of the lumber kilns located on the plant site. The table asks for kiln throughput in order to assess nominal equipment capability. Because kiln throughput varies depending on wood species, moisture content, etc., you are asked to provide best estimates of nominal throughput.

Although lumber kilns may not be part of the hardwood plywood or veneer manufacturing process, some plants are co-located with sawmills that operate lumber kilns and the lumber kilns contribute to the plant-wide HAP emissions. Because lumber kilns are sometimes operating on the same site as wood products plants and are not currently regulated under a NESHAP, they may be regulated as part of this NESHAP. The information requested on lumber kilns is needed by EPA to provide an understanding of how kiln operating parameters may affect emissions. This information may be used in setting the MACT floor and characterizing emissions from lumber kilns.

Make additional copies of Table 2 as needed. As with any section of the survey, if data requested in a table are already available in an alternative format (e.g., as sections/tables from a State permit application) that information can be attached in lieu of completing all or part of the table, as long as the attached information addresses all of the information requested in the table.

Section VII. Plywood Plant Operations.

Section VII should be completed for facilities that manufacture plywood. This section asks for information on the cores used to manufacture plywood, production amounts, plant production capacity, operating schedule, resin usage, and plywood presses. Information on the substrates or cores (such as MDF, softwood veneers, etc.) used to manufacture hardwood plywood will assist EPA in characterizing the hardwood plywood industry and in developing model plants.

Information on production amounts and plant capacity and operating schedules may be used in making subcategory decisions. For example, these data are used in evaluating size distinctions between facilities. Please note that you are asked for *gross* annual production rather than *net* annual production. Gross production is equal to net production plus any rejected material which has been processed but is unsuitable for sale. The EPA is requesting gross production data so that emissions data and production data will be on the same basis (i.e., even though material is rejected, the processing of that material results in emissions). Production data should be provided for the 1997 calendar year. Facilities that began operation of a process line after January 1, 1997 should provide an entire years worth of operational data for that process line. For example, a plant that began operation of a process line on March 1, 1997 should provide operational information from March 1, 1997 to March 1, 1998. In cases where a production line has not been operated for an entire year, the plant should estimate production information for an entire year based on the time the process line has been in actual operation, and document how the extrapolated value was calculated. This will ensure that all operating information collected by EPA is on an annual basis and will allow EPA to compare sizes of plants for purposes of subcategorizing and analyzing regulatory alternatives.

Question E asks you to list the types and amounts of resins used on annual basis to manufacture hardwood plywood. This information will allow EPA to compare the quantity and types of resins used among and between potential industry subcategories.

Question F asks about the types of presses at the facility. The purpose of this question is to help alleviate confusion regarding the numbers and types of presses used by hardwood plywood manufacturers. Some presses are used to solely flatten veneers, and others are used to press plywood panels and cure resin. (The confusion originates from some literature where plants are said to operate - for example - 8 presses, and it is not clear how many of the presses are plywood presses and how many are small presses used to flatten veneers.)

In Question G, you are asked to complete Table 3 for each of the plywood presses that you mentioned in Question F. Complete Table 3 for only those presses used to cure resin in plywood panels (not for presses used to flatten veneer). Information about presses will allow EPA to compare the operating parameters of presses used throughout the industry for purposes of characterizing the industry, establishing a MACT floor, and evaluating control options.

In Question H you are asked to describe the ventilation system (including the number of vents, fans, etc.) and the exhaust gas flow rate from the area above the hot press(es) that you described in Table 3. This information will be used to size and determine the feasibility of air pollution control devices. It is particularly important that EPA be able to determine when certain control technologies may prove infeasible for some sources.

Section IX. Facility Emissions

Question A (Table 4) requests information on the exhaust gas characteristics (flow rate, temperature, moisture content) for each unit operation that is a source of HAP emissions, but has not already been listed in the survey. The instructions clarify which unit operations should and should not be listed in Table 4. Dryers and presses which were listed in Tables 1, 2, and 3 should not be included in Table 4. Emission sources such as sanding and sawing operations and pneumatic conveying systems for wood material should NOT be listed in Table 4. Table 4 also asks respondents to list all applicable control devices used to control emissions from the unit operation or emission source.

Question B asks for emission test data for emission tests conducted since January 1, 1995. The EPA already has collected and compiled emission data for inclusion in EPA's "Compilation of Air Pollutant Emission Factors," commonly referred as the "AP-42". Also, the National Council of the Paper Industry for Air and Stream Improvement (NCASI) has recently completed the testing phase of an extensive emission test program to characterize and quantify HAP emissions from various emission sources that will be covered under the plywood and particleboard source category. Therefore, EPA is only seeking "new" (1995 and later) HAP emission data. Also, because NCASI will be providing EPA with the results of their emission test program, facilities that are participating in NCASI's study do not need to provide emission test reports for those sources that were tested as part of NCASI's study. All recent (1995 and later) HAP emission test data should be summarized using Table 5.

Section IX. Air Pollution Controls

This section requests information on air pollution control methods and devices. You are asked to describe any air pollution control methods and to complete Table 6 for add-on control devices. When completing Table 6, if emissions from a unit operation pass through multiple emission control devices, you should list the control devices in order (e.g., product cyclone/wet ESP). Also, control devices that treat emission streams from multiple unit operations should be numbered or otherwise consistently identified to make it clear that the same control device is treating multiple sources (e.g., wet scrubber controls veneer dryer Nos. 1, 3 and 5).

Only the control methods/devices installed on unit operations that use or emit HAP should be included in Table 6 and in your description of other air pollution control methods. Because many wood products facilities have numerous cyclones and baghouses that may not be associated with unit operations that use or emit HAP's, providing information on every cyclone and baghouse would impose an unnecessary burden on the industry. Information on control devices and methods is needed to ensure that the presence/absence of emission control systems is accounted for when analyzing the feasibility and costs of air pollution control systems.

List of Acronyms and Unit Abbreviations.

Acronym/Abbreviation	Description
acfm @ ^{o}F	Actual cubic feet per minute at <you specify temperature> degrees Fahrenheit
acfm	Actual cubic feet per minute
CBI	Confidential Business Information

CFR	Code of Federal Regulations
d	Day
dscf	Dry standard cubic feet per minute
EPA	U.S. Environmental Protection Agency
ESD	Emission Standards Division
ESP	Electrostatic precipitator (dry)
ft	Feet
ft^3	Cubic feet
gal	Gallon(s)
gr	Grains (7,000 grains = 1 pound)
HAP	Hazardous air pollutant(s)
hr	Hour
ID (ID No.)	Identification number
in.	Inch(es)
lb (lbs)	Pound(s)
LVL	Laminated veneer lumber
MACT	Maximum Achievable Control Technology
MDF	Medium density fiberboard
MBF	Thousand board feet
MMBF	Million board feet
MMSF	Million square feet
MSF	Thousand square feet
NCASI	National Council of the Paper Industry for Air and Stream Improvement
NESHAP	National Emission Standards for hazardous Air Pollutants
NO_x	Nitrogen oxides
OAQPS	Office of Air Quality Planning and Standards
OD	Oven dry
^oF	Degrees Fahrenheit
OMB	U.S. Office of Management and Budget
OSB	Oriented strandboard
PM	Particulate matter
PM_{10}	Particulate matter less than 10 microns

ppmv	Parts per million (volume basis)
sec (s)	Second(s)
SF (ft^2)	Square feet
THC	Total hydrocarbon
ton	Ton (2,000 pounds = 1 ton)
VOC	Volatile organic compound
WESP	Wet electrostatic precipitator
wk	Week(s)
yr	Year